CITY OF ANGELS

FILTER MEDIA REPLACEMENT PROJECT

ADDENDUM # 1

In response to various questions received during the bid process the following addendum has been prepared. This addendum is meant to clarify the original RFP for hatches and media levels and add project components for coating the area affected by the hatch replacement and disinfection of the filter after completion of media replacement. Contractor must acknowledge receiving this addendum in their bid.

1.1 HATCHES

A. Four (4) 20" diameter, hinged, cam locked type, with cast steel lid, quick opening manholes at the top. Location to be determined in the field as directed by City staff.

1.2 COATING

A. Filter Tank Internal

1. Surface preparation shall be an abrasive blast. Conform to the requirements of SSPC-SP10 "Near White Blast Cleaning". Paint all blasted surfaces within 8 hours of blasting. Remove all weld splatter by grinding or chipping prior to sandblasting.

2. Apply all material in strict accordance with manufacturer's instructions. Apply first coat immediately after surface preparation. Apply each coat to a uniform, even coating; lay material in one direction and finish at right angles. Allow material to thoroughly dry between coats. Scuff, sand and remove all runs, sags, overspray, surface roughness and other defects between each coat.

3. Interior of vessel shall be shop primed with 1 coat Tnemec 91-H20, Hydro-Zinc, 2.5 to 3.5 mils DFT.

4. Finish product to be used must be NSF 61 certified for potable water application. Product to be a high solids epoxy, Tnemec Series V140F pota-pox. Three coats are to be applied to give a finish DFT of 12 - 15 mils."

B. Tank exteriors are to be commercial sandblasted per SSPC-SP6, and painted with two (2) shop coats of Tnemec 91-H20, Hydro-Zinc, 2.5 – 3.5 mils DFT.

C. Filter Tank

1. Filter Tank Exterior

a. Surface preparation shall be an abrasive blast. Conform to the requirements of SSPC-SP6 "Near White Blast Cleaning". Paint all blasted surfaces within 8 hours of blasting. Remove all weld splatter by grinding or chipping prior to sandblasting.

b. Apply all material in strict accordance with manufacturer's instructions. Apply first coat immediately after surface preparation. Apply each coat to a uniform, even coating; lay material in one direction and finish at right angles. Allow

material to thoroughly dry between coats. Scuff, sand and remove all runs, sags, overspray, surface roughness and other defects between each coat.

c. Apply two (2) prime coats of Tnemec 91-H20, Hydro-Zinc, 2.5 – 3.5 mils DFT.

d. Finish product to be used must be NSF 61 certified for potable water application. Product to be a high solids epoxy, 1 coat of Tnemec 166, Epoxoline HS, 4 – 6 mils DFT, and 1 (second) coat Tnemec 1075, Endura-Shield II, 3 – 5 mils DFT.

1.3 MEDIA

A. Gavel Supporting Bed

1. A gravel support bed shall be incorporated in the bottom of each vessel, consisting of four (4) layers of graded gravel, with the largest size gravel loaded into the filter first and the succeeding smaller sizes placed on top. The supporting gravel graduations shall be as follows:

a. High Density Gravel (3.0) inches (SP Gravity 4.0, E.S. 1.42 mm. UC 1.2)

b. 3/8" x 3/16" (3.0) inches

c. ¾" x 3/8" (4.0) inches

d. 1-1/2" x ¾" (6.0) inches

2. The media shall be Water Treatment quality, washed and screened, and shipped in clearly marked one hundred (100#) pound bags. The gravel must meet the requirements of the American Water Works Association (AWWA) Specification number B-100-89.

3. All media is to be field installed.

B. Filtration Media

1. Each filter is to be provided with a 3" bed depth of garnet or ilimenite sand. The garnet or ilimenite sand is to meet the following criteria:

a. Specific gravity 4.0

b. Effective size (d_{10}) 0.20 - 0.30 mm

c. Uniformity coefficient less than 2.0

2. Each filter is to also be provided with a silica sand bed form a 9" bed depth. The silica sand is to meet the following criteria:

a. Specific gravity 2.60

b. Effective size (d_{10}) 0.45 - 0.55 mm

c. Uniformity coefficient less than 1.7

d. Acid solubility < 5%

e. Porosity 41.5%

3. In addition to the filter sand media, the equipment supplier shall furnish specifically graded anthracite to form a 18" bed depth. The Anthracite is to meet the following criteria.

a. Specific gravity 1.5-1.55

b. Effective size .9 – 1.00 mm

c.	Uniformity coefficient	less than 1.65
d.	Hardness	2.7 on the MOH scale
e.	Acid solubility	< 5%
f.	Porosity	49.5%

4. The mixed filter media bed depth shall total 30".
5. All filtration media shall be shipped in one (1) cubic foot bags on pallets.
6. All media shall be accepted under Standard 61 of the National Sanitation Foundation.
7. Media shall be loaded into the filters and conditioned in accordance with the manufacturers' recommendations.
8. All media is to be field installed by equipment installer.

1.4 DISENFECTION

A. The Contractor shall sterilize the filter after final media inspection by filling with water containing not less than 50 parts per million of chlorine and allow to stand for 24 hours. The filter shall be backwashed to remove the sterilization solution. The City will verify that the filter is bacteriologically acceptable. The Contractor shall repeat the sterilization procedure at no extra cost to the City until the tests are acceptable to the City.

1.5 SUBMITTALS

The Contractor shall provide complete shop drawings and/or manufacturer's data on every item to be incorporated in this project. All materials required for this project shall be submitted to the City for approval prior to installation of the materials. Submittals shall be made in triplicate at the Contractor's expense. Submittals shall include Safety Plans, Progress Schedule, Product Data, Shop Drawings, Samples, and Quality Assurance Control Data. The Contractor shall not perform any fabrication or work until submittal approval.

No compensation will be made for any manufactured item ordered prior to approval of the shop drawings. Submittals shall be made by the Contractor allowing ample time for review and distribution (ten working days) prior to beginning the work.